

each specific limitation is found in Desai et al. in the claimed order. Thus, the Action clearly fails to establish anticipation of the claims.

Furthermore, the Action asserts that claims 34 and 47 are “product-by-process claims”. This position is incorrect. The claims are specifically directed to a composition of matter, namely a fiber reinforced flexible matrix. The claims specifically recite the matrix comprising “a substantially continuous phase of said first and second polymer”. The claim language reciting the continuous phase being formed by melting the polymers without not melting the carpet fibers is a functional limitation defining the continuous phase of the first and second polymers in the matrix of the final product. Thus, this limitation defines the final product and defines the product in a manner that is distinguishable from Desai et al. This limitation does not convert the claims to “product-by-process claims”. Instead, the claim limitation further defines the composition and the physical characteristics of the claimed fiber reinforced flexible matrix.

Desai et al. clearly does not disclose or suggest a continuous phase of a first polymer and a second polymer having carpet fibers dispersed in the continuous phase. Desai et al. also does not disclose a continuous phase comprising a first and second polymer as in the claimed invention. Anticipation requires that each feature of the claimed invention be found in the cited reference in the order of the claimed invention. The Action has not identified where Desai et al. allegedly discloses each of these features.

Desai et al. specifically disclosed in paragraph 0038 forming “powder” particles from the various materials which are then applied to a substrate to form a uniform layer of particles having uniform thickness. The substrate can be a release paper, a belt or a bottom surface of a primary backing. The particles are heated and fused to form the continuous layer. Desai et al. specifically states “fusing or fused, for purposes of the present invention, is understood to mean that the recycled material, preferably a powder, is not completely reduced to a liquid

state, like liquid plastisol, but instead, is joined of the individual particles or granules of the recycled material” (emphasis added). Moreover, Desai et al. specifically discloses “preferably a majority, and most preferably over 90% of the recycled particles are granules substantially maintain their identity as particles” (emphasis added). Thus, Desai et al. expressly discloses that the resulting product is not a continuous phase of first and second polymer, but rather fused discrete particles that maintain their particle characteristics. The fused particles of Desai et al. do not define a continuous phase of a first and second polymer. The Action has failed to identify how the fused particles of Desai et al. correspond to the claimed continuous phase.

Furthermore, the Action improperly ignores the plain claim language of claims 37 and 47 which specifically define the composition of matter. Claims 37 and 47 recite the feature of the polymers being melted to form the continuous phase. Thus, the limitation expressly defines the nature and characteristics of the continuous phase. It is improper to ignore the express plain language of the claimed where the language defines the composition of matter.

As noted above, Desai et al. expressly states that the polymers are particles that are not reduced to a liquid state and retain their particle characteristics. Thus, Desai et al. does not form a continuous phase as in the claimed invention. The Examiner disregards this express language of Desai et al. and fails to provide a reasonable basis that the fused particles of Desai et al. that are not melted correspond to the claimed continuous phase formed by melting the polymers. It is clear that the claimed continuous phase of the first and second polymers and the fused particles of Desai et al. are not the same. Thus, Desai et al. does not anticipate claims 34 and 47.

Desai et al. does not disclose or suggest the claimed final product, or the process of forming the final product. Thus, the resulting product of Desai et al. is not the same as in the claimed uniform matrix.

Desai et al. does not disclose the features of the dependent claims in combination with the features of the independent claims. Desai et al. does not disclose carpet pieces having a fiber length of 1/8 to 2 inches as in the claimed invention. Desai et al. is specifically directed to forming a powder from the various materials including the carpet scrap. Desai et al. expressly discloses that the recycled powders have a particle size of 3,000 μm or less, and more preferably 1,000 μm or less, with a preferred range of about 250 μm to 1,500 μm . See, paragraph 0034. Thus, it is impossible for the powders used in the final product of Desai et al. can have a fiber length within the claimed range. The passage referred to in the Action refers to the chunks or particles of the fiber before feeding to the granulator. Thus, Desai et al. only discloses the pieces of fiber before being reduced to the appropriate particle size for fusing the powder into the final product. The passage referred to in the Action has no relation to the final product of Desai et al. or the claimed invention. Accordingly, claim 37 is not anticipated by Desai et al.

Desai et al. also does not disclose a continuous matrix including polyvinyl chloride plasticizer as in claim 35, or polyethylene copolymer as in claim 36, in combination with the features of claim 34.

Desai et al. does not disclose a homogenous mixture of a polyvinyl chloride and discrete carpet fibers having a length of 1/8 to 2 inches as in claim 37. As noted above, Desai et al. discloses the product being formed from fused particles that are reduced by grinding. There is no suggestion that the fused particles of Desai et al. contain carpet fibers having a length of 1/8 to 2 inches.

Desai et al. also does not disclose the polymer fibers as in claim 38, the amount of PVC of claim 39, or the shore hardness of claim 40, either alone or in combination with the features of claim 34. The Action fails to identify where each of these features are disclosed

either expressly or inherently in Desai et al. Accordingly, these claims are not anticipated by Desai et al.

Desai et al. also does not disclose the carpet scrap of claim 41, the specific plasticizer of claim 42, the amount of carpet fibers of claim 43, the amount of the PVC from the carpet scrap as in claim 44 and claim 45, the first polymer being PVC as in claim 46, or the amounts of the materials of claim 48, in combination with the features of claims 34 or 47.

In view of the clear deficiencies of Desai et al., the claims are not anticipated.

Rejection Under 35 U.S.C. § 103(a)

On page 3 of the Action refers to claims 48 and 49 as being rejected under 35 U.S.C. § 103(a). Claims 50-58 are not rejected and are not addressed in the Office Action.

Independent claim 49 is directed to a process of forming a fiber reinforced flexible molded article of a matrix of a continuous phase of the first polymer component and the polyvinyl chloride having unmelted fiber component dispersed therein. Claim 49 recites the steps of supplying the feed mixture to an inlet of an extruder, heating the mixture to melt the first polymer component of the carpet scrap and the flexible polyvinyl chloride without melting the fiber component where the feed mixture is defined by specific amounts of the flexible polyvinyl chloride, carpet scrap and backing material. The combination of Desai et al. and Young et al. does not render the claims obvious.

As noted above, Desai et al. is specifically directed to forming powder particles of the various materials and fusing the particles together by heating without melting the powder particles to a liquid state. Thus, it would not have been obvious to one of ordinary skill in the art to extrude the powder particles of Desai et al. since the resulting product would not be the same as intended by Desai et al. It is well settled that it is not obvious to one of ordinary skill

in the art to modify the prior product or process where the modification would destroy the intended result.

Young et al. is directed to a process of extruding carpet scrap by melting the polymer components with various other additives to form pellets for further processing. Thus, Young et al. does not produce or form a fiber reinforced flexible molded article. The carpet scrap of Young et al. is granulated to a controlled particle size. There is no suggestion in Young et al. of melting the polymer components in an extruder without reducing the fiber length as in the claimed invention. Furthermore, there is not suggestion in Young et al. of producing a molded flexible article having a matrix of a continuous phase of the first polymer component and the polyvinyl chloride with the unmelted fiber component dispersed therein. Therefore, Young et al. does not disclose or suggest the process of the claimed invention.

Desai et al. is specifically directed to forming an article from fused particles. It would not have been obvious to one of ordinary skill in the art to feed the mixture of materials of Desai et al. through the extruder of Young et al. Furthermore, even if one were to do so, the resulting product would not be the claimed process and would not produce the claimed molded flexible article of a matrix of a continuous phase of the first polymer component and the polyvinyl chloride having unmelted fiber components therein. Thus, independent claim 49 is not obvious over the combination of Desai et al. and Young et al.

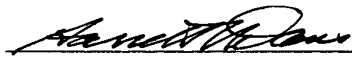
On page 4 of the Action, the Action refers to claim 47 as being a product-by-process claim. The basis of this statement is not understood in connection with the rejection of claims 48 and 49. Claim 47 is not rejected over the combination of Young et al. and Desai et al. so that this statement appears unnecessary.

The dependent claims are also allowable as depending from an allowable base claim and for reciting additional features of the invention. For example, the combination of Young et al. and Desai et al. does not suggest a process of forming the molded flexible article having

5 to 20% by weight of the fiber component, 45 to 85% by weight of the first polymer component and polyvinyl chloride as in claim 50, about 10 to 55% by weight polyvinyl chloride supplied from the carpet scrap as in claim 51, the uniform mixture of the melted polyvinyl chloride and unmelted fiber component having a melt flow index of less than about 5 as in claim 52, the fiber component being polyamide fibers and polyester fibers as in claim 53, the step of comminuting the carpet scrap into pieces of up to 2 inches prior to feeding to the extruder as in claim 54, heating the feed mixture to 140 to 190°C to melt the polyvinyl chloride without melting the fiber component as in claim 55, the flexible polyvinyl chloride having a shore hardness of about 40 to 100 as in claim 56, the resulting matrix comprising 10 to 40% by weight unmelted filler materials from the carpet as in claim 57, or the carpet scrap containing 50 to 80% by weight inorganic fillers and latex materials which are dispersed in the continuous phase as in claim 58, in combination with the process steps of claim 49.

In view of the above comments, the claims are submitted to be allowable over the art of record. Accordingly, reconsideration and allowance are requested.

Respectfully submitted,


Garrett V. Davis
Reg. No. 32,023

Roylance, Abrams, Berdo & Goodman, L.L.P.
1300 19th Street, N.W., Suite 600
Washington, D.C. 20036
(202) 659-9076

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